



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

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Ref: EPR ER

PROGRESS POLLUTION REPORT #2

Superior Waste Rock

Superior, Mineral County, Montana

I. HEADING

Date: 09/05/02
From: Tien Nguyen, On-Scene Coordinator
Agency: EPA
Unit: Region VIII - Emergency Response Program
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Denver Colorado 80202
(303) 312-6820
To: Kelvin Mould, EPA Headquarters
POLREP No.: #2
Site: Superior Waste Rock

II. BACKGROUND

Site Number: 08-ER
Party Conducting the Action: EPA
Response Authority: CERCLA
NPL Status: No
Action Memorandum Status: 08/02/02
Date Action Started: 08/20/02
Completion Date: TBD

III. SITE INFORMATION

A. Incident Category

Time Critical, Fund-Lead

B. Site Description

1. Site description

The Site covers the town of Superior, in Mineral County, Montana, where tailings reportedly have been used as a fill surface soil and contamination exists at local residences and the Superior High School track. The Site is located down stream from the Flat Creek drainage, along the banks of the Clark Fork River, and approximately 3.5 miles south of the Iron Mountain Mine and Mill. The waste rock/tailings reportedly are from the Iron Mountain Mine and Mill.



2. Site evaluation

See POLREP for additional Site information.

On January 23, 2002, the Montana Department of Environmental Quality (MDEQ) requested EPA to evaluate the Superior High School track and Superior residential properties for a possible removal action. From the results, a Site Sampling Plan has been developed and from June 4 - 12, 2002 the EPA Region VIII Removal Program tasked START2 Contractor to collect surface and sub-surface soil samples for XRF on-site screening. A total of more than 650 samples were collected from nearly 100 residential properties, who had signed an Access On Consent with EPA, and twelve separate areas, including right-of-ways and Town/County properties within and around Superior, which were identified as potential contaminated areas by the Mineral County Health and the Superior's Public Work personnel.

Preliminary XRF results show that nine residential properties, three Town/County properties (the High School track, the County fairground, and the Town shop) and five right-of-way locations have elevated levels of lead and arsenic contamination. These levels are ranging from 500 ppm to 11,000 ppm for lead or from 100 ppm to 1,700 ppm for arsenic. Ten percent of these XRF soil samples were sent to the labs for analytical confirmation. Four of these samples were also run for Toxicity Characteristics Leaching Procedures (TCLP). On July 9, 2002, the preliminary sampling results indicated that all four samples failed TCLP for lead. These results ranged from 36 mg/l to 140 mg/l; the regulatory standard for lead is 5 mg/l. The four samples were collected from the high school track, the County fairground, the home at 201 Spruce (along the fence line), and the home at 208 Main street (forest service home).

3. Description of threat

Arsenic and lead have been identified as the contaminants posing the greatest risk and hazard; however, other metals, including antimony, cadmium, copper, iron, manganese, mercury, silver, and zinc have levels of concentrations at over three times the level of background samples. The threats posed by this Site include dermal absorption; ingestion of potentially contaminated plants and fish; and the inadvertent ingestion of contaminated soil and surface water.

IV. RESPONSE INFORMATION

A. Situation

1. Removal actions

From August 20 to August 29, 2002, under the direction of EPA/OSCs, the EPA's Emergency Response Contractor completed the Removal of mine tailings and contaminated soils at the high school track, the County fairground, and several residence driveways and the Town's street right-of-ways. The cleanup levels of lead and arsenic for the Removal were determined in the Action Memorandum: the average surface soil concentration exceeds 3,000 mg/kg of lead or 400 mg/kg of arsenic. The soil was removed to a maximum depth of 12", except for vegetable gardens to a maximum of 24"; however, there was no garden-soil involved in this removal. The Removal did not include tailings and contaminated soils at the house owned by the U.S. Forest Services. USFS had conducted its own removal.

The excavated areas, including the high school track, the county fairground, and the driveways and right-of-ways were backfilled using gravels, a material comparable with excavated materials. Confirmation samples were collected at each excavated area.

2. Disposal

The mine tailings were excavated and staged separately from the contaminated soils for disposal purposes. An estimate of 6,500 cubic yards of mine tailings (approximately 4,000 c.y.) and contaminated soils (appx. 2,500 c.y.) were excavated during this Removal and currently staged at the Mineral County Airport ground awaiting treatment and final disposal. The MDEQ and Mineral County officials have agreed to provide the Mineral County Airport ground, approximately 3 miles from the Site, to be used as a repository for the contaminated soils. The tailings and contaminated soils which failed TCLP will be treated before being landfilled and capped.

3. State and Local Role

As a result of concern expressed by the community, the threats posed at the Superior Waste Rock Site and the inability of the State to fund removal of the potentially hazardous materials, the State requested assistance from EPA in undertaking a Removal Action. Staff members from MDEQ, Mineral County Health, School District, and the Town of Superior are working with EPA on a continuing basis. They will continue to be informed and involved.

4. Enforcement

The Agency has contacted with the PRPs and issued a General Notice letter to them on August 21, 2002.

B. Future Plans

The removed tailings need to be treated before final disposal. A preliminary treatment study has been conducted and awaits test results. Based on these or additional treatment test results, a process to treat tailings will be developed. In addition, the OSC continues working with MDEQ and County officials and FAA to use the County Airport ground as a final repository for the treated wastes. Engineers will assist the OSC in designing a repository cell at the County airport ground.

V. COST INFORMATION

Initial costs for the first Phase of this Removal have not been received at this time but the estimated EPA costs for this Phase of the Removal are \$350,000.